

CLAIMS

1. A device for mounting a tire on a vehicle rim, said device comprising a first means (1) designed to receive the rim and place it in the tire mounting position, an arm (2), a first end of which is equipped with a head (4) for mounting the tire on the rim, said head (4) being arranged so as to rotate about its axis of symmetry, a second means (3a, 3b, 3c, 3d) connected to the second end of the arm (2) and designed to transmit to said arm a movement of revolution about the axis of symmetry of the rim in the tire mounting position, characterized in that said arm (2) is inclined at an acute angle with respect to the axis of symmetry of the rim in the tire mounting position, the first end of the arm (2) thus being furthest away from the axis of symmetry of the rim in the tire mounting position.
2. The device as claimed in claim 1, characterized in that it comprises a third means (5) designed to displace the arm (2) orthogonally with respect to the axis of symmetry of the rim in the tire mounting position, and a fourth means (6) designed to displace the arm (2) parallel to the axis of symmetry of the rim in the tire mounting position.
3. The device as claimed in either of claims 1 and 2, characterized in that it comprises a fifth means (10) designed to orient at a given angle a bead of the tire that is to be mounted on its rim.
4. The device as claimed in any of claims 1 to 3, characterized in that the axis of rotation of the head (4) for mounting the tire is inclined at an acute angle with respect to the axis of symmetry of the rim in the tire mounting position.
5. The device as claimed in any of the preceding claims 1 to 4, characterized in that the head (4) for mounting the tire essentially has the shape of a truncated cone.

6. The device as claimed in any of claims 1 to 4, characterized in that the head (4) for mounting the tire essentially has the shape of a truncated hemisphere.

5 7. The device as claimed in any of claims 1 to 6, characterized in that it comprises a programmable control unit designed to receive information relating to the type of rim and the type of tire to be mounted, and to control in return the position of the arm (2) during mounting of the tire on the rim by the device.

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8. The device as claimed in any of the preceding claims, characterized in that the first means (1) designed to receive the rim and place it in the tire mounting position comprises a first (11a) and a second (11b) notched spindle which are coupled by a gearwheel (12) and arranged below the plane for receiving said rim, each of said spindles (11a, 11b) being connected via a transmission block (13a, 13b) to at least one clamp (14a, 14b), each transmission block (13a, 13b) being connected to sixth means (15a, 15b) designed to apply a force to said block (13a, 13b) in the direction of the spindle (11a, 11b) which it connects to each clamp (14a, 14b) and in opposite directions, so as to displace each clamp (14a, 14b) between a position of engagement with a peripheral edge of the rim by each clamp (14a, 14b) and for mounting the tire and a position of disengagement from said peripheral edge by each clamp (14a, 14b) once said tire has been mounted on the rim.

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9. The device as claimed in claim 8, characterized in that it comprises a hub (16) designed to engage a central orifice of said rim when it is released from its tire mounting position once said tire has been mounted on said rim.

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10. The device as claimed in either of claims 8 and 9, characterized in that it comprises at least two pins (17a, 17b) designed to contact the inner edge of the rim with a view to holding it in place when it is released from its tire mounting position once said tire has been mounted on said rim.

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